PUBLIC HEALTH Bulletin

COUNTY OF ORANGE • HEALTH CARE AGENCY

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MRSA—*an increasing threat*

Methicillin-resistant *Staphylococcus aureus* (MRSA) is of increasing concern for a number of reasons.

1) It is accounting for an ever-larger share of nosocomial infections, with attendant increased mortality and cost;

2) It is now recognized as an emerging pathogen in community-acquired *S. aureus* infections; and

3) Vancomycin-resistant *S. aureus* (VRSA) is now a reality, raising the possibility of untreatable *S. aureus* infections.

Nosocomial MRSA

In 1968, the first cases of MRSA infections in the United States were reported. Since that time MRSA infections acquired in hospitals have become an increasingly severe problem. The most recent data from the National Nosocomial Infections Surveillance System[1] indicate that 53.5% of *S. aureus* infections in ICU patients were resistant to methicillin in 1999. This was an increase of 40% compared to the average rate for the preceding 5 years (1994-1998). These infections are more lethal and more costly than infections with methicillin-sensitive *S. aureus* (MSSA). Genetic studies of MRSA isolates have shown that resistance is conferred by acquisition of the staphylococcal cassette chromosome *mec* (SCC*mec*); however, worldwide spread of MRSA is the result of dissemination of a few clones—evidence that transfer of the SCC*mec* genetic material is a rare occurrence. This means that the spread of MRSA is primarily due to patient-to-patient transfer by healthcare workers (HCWs). Antibiotic use helps to maintain MRSA by providing it with a selective advantage.

Studies have documented frequent MRSA contamination of HCW hands and clothing after contact with an infected patient, contaminated equipment (including stethoscopes, otoscopes, etc.), and contamination of the patient environment. For example, 69% of white coats became contaminated after examining a patient with MRSA or vancomycin-resistant enterococcus (VRE), and the organisms were transferred to the hands in 27% of HCWs after touching the coat.

While there is a great deal of controversy over the means for controlling MRSA and even whether or not it should be attempted, studies have shown it is possible and cost-effective. Recently the Society for Healthcare Epidemiology of America published a guideline for preventing nosocomial transmission of MRSA and VRE[2]. Control entails the following strategies.

1) Active surveillance cultures of high-risk[3] patients to identify the reservoir for spread.

2) Hand hygiene

3) Barrier precautions for patients known or suspected to be colonized or infected with resistant pathogens such as MRSA or VRE—gloves, gowns and masks.

4) Antibiotic stewardship

5) Selective use of decolonization or suppression of colonized patients

6) Educational programs for HCWs

7) Computer tracking system for patients with resistant pathogens

8) Adequate disinfection of the environment—agent used, method of application, measures of effectiveness

Community-acquired MRSA (CA-MRSA)

Increasingly there are reports of MRSA infections of skin or soft tissues in persons with no known contact to a healthcare facility. These infections can be very serious, as in the four pediatric deaths reported in the Morbidity and Mortality Weekly Report[4], all of whom were treated initially with cephalosporins, which are ineffective against MRSA. Recently, clusters of CA-MRSA have been reported, including three outbreaks in Los Angeles County involving, respectively, the jail, a football team, and among gay men.[5] Other clusters involving athletic teams have been reported in fencers and wrestlers.[6] In San Francisco, about 5% of injection drug users are colonized with

... (Continued on Page 5)

THIS ISSUE ...

Health Officer adds two new reportable diseases for OC

Health Officer Mark B. Horton, M.D., has added invasive pneumococcal disease and hospital admissions due to varicella (chickenpox) to the list of reportable conditions in Orange County, effective August 5, 2003.

Invasive pneumococcal disease (IPD) is a major cause of pneumonia and meningitis in the United States. Increasing resistance of *S. pneumoniae* to antibiotics in the last decade is a serious public health concern. In addition, it is important to monitor IPD to continuously assess the effectiveness of the two vaccines now available, one for children less than five years of age and one for older adults and persons with certain underlying conditions. The Council of State and Territorial Epidemiologists has recommended the implementation of IPD surveillance to raise awareness of vaccine

... (Continued on Page 2)

Screening for Tetanus vaccination status

Information recently published in the *Morbidity and Mortality Weekly* Report (MMWR) by The Centers for Disease Control and Prevention (CDC) emphasizes the need for health care providers to provide tetanus vaccination for individuals with delayed or incomplete vaccinations, especially those in high-risk groups, and to be familiar with post-exposure preventive treatment recommendations.

During 1998-2000, 130 cases of tetanus were reported nationally, an average of 43 cases per year. Seventy-three percent of cases with injury information available reported an acute injury; of these, only 37% sought medical care for the acute injury, and **only 63% of those eligible received tetanus toxoid for wound prophylaxis.**[1]

The 2000 National Immunization Survey showed that 94% of children aged 19-35 months had received three doses of tetanus toxoid. In contrast, another survey showed only 40% of adults age 65 or older had received a booster dose of tetanus toxoid during the previous ten years.

High Risk Groups

From 1998-2000, twenty deaths due to tetanus were reported, with 75% of the deaths occurring in people aged 60 and older. Diabetic patients constituted 12% of the reported tetanus cases between 1998-2000, with a median age of 72 for the diabetic patients. Intravenous drug users accounted for 15% of the tetanus cases. Sixty percent of cases occurred in males.

Conclusions

Tetanus occurs primarily among persons who are unvaccinated or inadequately vaccinated. The average annual incidence of tetanus during 1998-2000 was 25% lower than in the late 1980's and 96% lower than reported in 1947. Disease reduction goals for the United States include elimination of tetanus among persons younger than 35 by the year 2010.

The highest rates of tetanus and tetanus-related deaths were among adults 60 years of age and older. The immune response to tetanus toxoid can be less robust with increasing age, especially among adults with chronic conditions. Older adults may have missed booster vaccinations or may not have received a primary series of tetanus toxoid. While tetanus among children is uncommon in the United States, most of the cases that do occur happen among children whose parents object to vaccination.

For a half-century, the recommendation that persons receive a primary three-dose series of tetanus toxoid containing vaccine and a booster dose every ten years has proven effective in preventing tetanus or modifying its severity. Although some vaccinations may have been delayed due to a vaccine shortage that began in late 2000, sufficient supplies of vaccine have been available to resume routine vaccination since 2002.

Health care providers should evaluate their patients' tetanus vaccination status at each encounter and vaccinate as needed. Special attention should be given to high-risk groups, including older adults, diabetics, intravenous drug users, persons of Hispanic ethnicity, pregnant women and those who may not have received a primary series, such as immigrants.

A complete copy of the MMWR summary on tetanus surveillance in the United States from 1998-2000 is available on the Internet at http://www.cdc.gov/mmwr/preview/mmwrhtml/ss5203a1.htm. Comprehensive information about tetanus is available at www.cdc.gov/nip/publications/pink/Tetanus-sm.pdf.

[1]Antibiotic prophylaxis against tetanus is neither practical nor useful in managing wounds; proper immunization plays the more important role. The need for active immunization, with or without passive immunization, depends on the condition of the wound and the patient's immunization history (see table below). Rarely have cases of tetanus occurred in persons with a documented primary series of tetanus toxoid. Persons with wounds that are neither clean nor minor, and who have had 0-2 prior doses or have an uncertain history of prior doses, need tetanus immune globulin (TIG) as well as Td toxoids. This is because early doses of toxoid do not induce immunity, but only prime the immune system. The TIG provides temporary immunity by directly providing antitoxin. This ensures that protective levels of antitoxin are achieved even if an immune response has not yet occurred.

Tetanus Wound Management

Vaccination History	Clean, minor wounds Td	Clean, minor wounds TIG	All other wounds Td	All other wounds TIG
Unknown or <3 doses	Yes	No	Yes	Yes
3+ doses	No*	No	No**	No

* *Yes, if >10 years since last dose*
** *Yes, if >5 years since last dose*

Td: tetanus and diphtheria toxoid combination booster.
TIG: Tetanus immune globulin

Diseases *(Continued from Page 1)*

recommendations, identify areas or populations in which vaccine use is sub-optimal, and monitor implementation of pneumococcal vaccine programs. Monitoring the antibiotic resistance patterns of *S. pneumoniae* isolates in Orange County can provide important information to clinicians. The reportable condition is defined as "*S. pneumoniae* isolated from a normally sterile site (e.g., cerebrospinal fluid, blood, joint fluid, pleural fluid, pericardial fluid, other)."

The second condition added to the reporting list is hospital admissions due to varicella (chickenpox). The California Department of Health Services made varicella deaths reportable in California in 2002. With the introduction and widespread use of the varicella vaccine, it is important to monitor varicella deaths as a marker of the effectiveness of vaccination policies. The decrease in number of varicella infections makes monitoring of hospital admissions, in addition to deaths, feasible. These data will provide more useful information than deaths alone. In addition, smallpox, especially in its early stages, may be mistaken for varicella infection—reporting of severe cases may help to detect a bioterrorist attack using smallpox.

If you have questions about the list of reportable diseases in Orange County, which is found on Page 3, or the reporting process, please call Public Health Epidemiology at (714) 834-8180.

Please report the following diseases/conditions, including probable cases, to Epidemiology & Assessment using the *specified method and time frame*.

Epidemiology and Assessment
P.O. Box 6128, Santa Ana, CA 92706-0128
Telephone: (714) 834-8180, Fax: (714) 834-8196

If a report is urgent and it is a holiday, weekend, or after regular work hours, please contact the public health official on call at (714) 628-7008.

☎ reported **REPORT IMMEDIATELY** by telephone to Epidemiology.
❶ Report within **ONE (1) WORKING DAY** of identification by telephone, fax, or mail to Epidemiology.
⑦ Report within **SEVEN (7) CALENDAR DAYS** of identification by telephone, fax, or mail to Epidemiology.
★ When **two (2) or more cases of suspected cases of foodborne illness** from ***separate households*** are suspected to have the **same source of illness**, please **REPORT IMMEDIATELY** by telephone to Epidemiology.

⑦ AIDS **[Please call, DO NOT FAX REPORT]**
❶ Amebiasis
❶ Anisakiasis
☎ Anthrax
❶ Babesiosis
☎ Botulism (infant, foodborne, wound)
☎ Brucellosis
❶ Campylobacteriosis
⑦ Chancroid
⑦ Chlamydial infections
☎ Cholera
☎ Ciguatera Fish Poisoning
⑦ Coccidioidomycosis
❶ Colorado Tick Fever
❶ Conjunctivitis, acute infections of the newborn—please specify etiology
❶ Cryptosporidiosis
⑦ Cysticercosis
☎ Dengue
☎ Diarrhea of newborn, outbreaks only
☎ Diphtheria
☎ Domoic Acid Poisoning (Amnesic Shellfish Poisoning)
⑦ Echinococcosis (Hydatid Disease)
⑦ Ehrlichiosis
❶ Encephalitis—please specify etiology
☎ *Escherichia coli* O157:H7 infection
★ Foodborne disease
⑦ Giardiasis
⑦ Gonococcal infections
❶ *Haemophilus influenzae*, invasive disease (persons under 30 years of age)
☎ Hantavirus infections
☎ Hemolytic Uremic Syndrome
❶ Hepatitis A
⑦ Hepatitis B (specify acute case or chronic)
⑦ Hepatitis C (specify acute case or chronic)
⑦ Hepatitis D (Delta)
⑦ Hepatitis, other, acute
⑦ HIV **[Please call, DO NOT FAX REPORT]**
⑦ Kawasaki Syndrome (Mucocutaneous Lymph Node Syndrome)
⑦ Legionellosis
⑦ Leprosy (Hansen's Disease)
⑦ Leptospirosis
❶ Listeriosis
⑦ Lyme Disease
❶ Lymphocytic Choriomeningitis
❶ Malaria
❶ Measles (Rubeola)
❶ Meningitis—please specify etiology
☎ Meningococcal infections
⑦ Mumps
⑦ Non-Gonococcal Urethritis (excluding lab confirmed Chlamydial infections)
☎ Outbreaks
☎ Paralytic Shellfish Poisoning
⑦ Pelvic Inflammatory Disease (PID)
❶ Pertussis (Whooping Cough)
☎ Plague, human or animal
❶ Pneumococcal disease, invasive
❶ Poliomyelitis, paralytic
❶ Psittacosis
❶ Q Fever
☎ Rabies, human or animal
❶ Relapsing Fever
⑦ Reye Syndrome
⑦ Rheumatic Fever, acute
⑦ Rocky Mountain Spotted Fever
⑦ Rubella (German Measles)
⑦ Rubella Syndrome, congenital
❶ Salmonellosis (other than Typhoid Fever)
☎ Scombroid Fish Poisoning
❶ Shigellosis
☎ Smallpox (Variola)
❶ Streptococcal infections (invasive disease caused by group *A Streptococcus*; outbreaks of any type; individual cases in food handlers and dairy workers only)
❶ Swimmer's Itch (Schistosomal Dermatitis)
❶ Syphilis
⑦ Taeniasis (request of local health officer)
⑦ Tetanus
⑦ Toxic Shock Syndrome
⑦ Toxoplasmosis
❶ Trichinosis
❶ Tuberculosis (including suspected cases)
☎ Tularemia
❶ Typhoid Fever, cases and carriers
⑦ Typhus Fever
☎ Unusual diseases
☎ Varicella (hospitalizations or deaths)
❶ *Vibrio* infections
☎ Viral Hemorrhagic Fevers (e.g., Crimean-Congo, Ebola, Lassa, and Marburg viruses)
❶ Water-associated disease
☎ Yellow Fever
❶ Yersiniosis

Reportable Noncommunicable Diseases/Conditions: Disorders characterized by lapses of consciousness, Alzheimer's disease and related disorders; cancer [except (1) basal and squamous skin cancer unless occurring on genitalia, and (2) carcinoma in-situ and CIN III of the cervix]; animal bites and scratches; child lead levels ≤10μg/dL; suspected/confirmed pesticide-related illnesses; child and elder abuse; and domestic violence. To report noncommunicable diseases/conditions, please see the "Reportable DiseasesReporting Other Than Communicable Diseases" page on the website below:

http://www.ochealthinfo.com/epi

COUNTY OF ORANGE, CA ▪ HEALTH CARE AGENCY ▪ PUBLIC HEALTH

CONFIDENTIAL MORBIDITY REPORT

NOTE: For STD, Hepatitis, or TB, complete appropriate section below. Special reporting requirements and reportable diseases on back.

DISEASE BEING REPORTED: _____ If applicable, specimen date ___ ___ ___ (MONTH DAY YEAR) Source: _____

Patient's Last Name | **Social Security Number** ___ — ___ — ___

First Name and Middle Name | **Birth Date** ___ ___ ___ (MONTH DAY YEAR) | **Age**

Address: Number, Street | **Apt./Unit Number**

City/Town | **State** | **Zip Code**

Area Code **Home Telephone** ___ — ___ — ___

Gender M F

Pregnant? Y N UNK

Estimated Delivery Date ___ ___ ___ (MONTH DAY YEAR)

Area Code **Work Telephone** ___ — ___ — ___

Patient's Occupation/Setting
- ☐ Food service ☐ Day care ☐ Correctional facility
- ☐ Health care ☐ School ☐ Other: _____

Ethnicity (✓ one)
- ☐ Hispanic/Latino
- ☐ Non-Hispanic / Non-Latino

Race (✓ one)
- ☐ African-American/Black
- ☐ Asian / Pacific Islander (3 one)
  - ☐ Asian-Indian ☐ Japanese
  - ☐ Cambodian ☐ Korean
  - ☐ Chinese ☐ Laotian
  - ☐ Filipino ☐ Samoan
  - ☐ Guamanian ☐ Vietnamese
  - ☐ Hawaiian _____
  - ☐ Other:
- ☐ Native American / Alaskan Native
- ☐ White _____
- ☐ Other:

DATE OF ONSET ___ ___ ___ (MONTH DAY YEAR)

DATE DIAGNOSED ___ ___ ___ (MONTH DAY YEAR)

DATE OF DEATH ___ ___ ___ (MONTH DAY YEAR)

Reporting Health Care Provider

Reporting Health Care Facility

Address

City **State** **Zip Code**

Telephone Number ( ) **Fax** ( )

Submitted By | **Date Submitted** ___ ___ ___ (MONTH DAY YEAR)

REPORT TO:

Orange County Public Health

Fax: (714) 834-8196

Mail: P.O. Box 6128
Santa Ana, CA 92706-0128

Phone: (714) 834-8180

SEXUALLY TRANSMITTED DISEASES (STD)

Syphilis
- ☐ Primary (lesion present)
- ☐ Secondary
- ☐ Early latent < 1 year
- ☐ Latent (unknown duration)
- ☐ Late latent > 1 year
- ☐ Late (tertiary)
- ☐ Congenital
- ☐ **Neurosyphilis**

Syphilis Test Results
- ☐ RPR Titer: _____
- ☐ VDRL Titer: _____
- ☐ FTA/MHA: ☐ Pos ☐ Neg
- ☐ CSF-VDRL: ☐ Pos ☐ Neg
- ☐ Other: _____

Gonorrhea
- ☐ Urethral/Cervical
- ☐ PID
- ☐ Other: _____

Chlamydia
- ☐ Urethral/Cervical
- ☐ PID
- ☐ Other: _____

- ☐ **PID (Unknown Etiology)**
- ☐ **Chancroid**
- ☐ **Non-Gonococcal Urethritis**

STD TREATMENT INFORMATION
- ☐ **Treated (Drugs, Dosage, Route)** _____ _____
- Date Treatment Initiated ___ ___ ___ (MONTH DAY YEAR)
- ☐ **Untreated**
  - ☐ Will treat
  - ☐ Unable to contact patient
  - ☐ Refused treatment
  - ☐ Referred to: _____

VIRAL HEPATITIS
- ☐ **Hep A**
- ☐ **Hep B**
  - ☐ **Acute**
  - ☐ **Chronic**
- ☐ **Hep C**
  - ☐ **Acute**
  - ☐ **Chronic**
- ☐ **Hep D (Delta)**
- ☐ **Other:** _____

Please send copies of the hepatitis serologies (required for diagnosis) and liver enzymes (if done).

Suspected Exposure Type
- ☐ Blood transfusion ☐ Other needle exposure
- ☐ Sexual contact ☐ Household contact
- ☐ Child care ☐ Other: _____

TUBERCULOSIS (TB)

Status
- ☐ **Active Disease**
  - ☐ Confirmed
  - ☐ Suspected
- ☐ **Infected, No Disease**
  - ☐ Converter
  - ☐ Reactor

Site(s)
- ☐ Pulmonary
- ☐ Extra-Pulmonary
- ☐ Both

Mantoux TB Skin Test
- Date Performed ___ ___ ___ (MONTH DAY YEAR)
- Results _____ mm ☐ Pending ☐ Not done

Chest X-ray
- Date Performed ___ ___ ___ (MONTH DAY YEAR)
- ☐ Normal ☐ Pending ☐ Not done
- ☐ ☐ Cavitary ☐ Abnormal/Noncavitary _____

Bacteriology
- Date Specimen Collected ___ ___ ___ (MONTH DAY YEAR)
- Source: _____
- Smear: ☐ Pos ☐ Neg ☐ Pending ☐ Not done
- Culture: ☐ Pos ☐ Neg ☐ Pending ☐ Not done
- Other test(s): _____

TB TREATMENT INFORMATION
- ☐ **Current Treatment**
  - ☐ INH ☐ RIF ☐ PZA
  - ☐ EMB ☐ Other: _____
- Date Treatment Initiated ___ ___ ___ (MONTH DAY YEAR)
- ☐ **Untreated**
  - ☐ Will treat
  - ☐ Unable to contact patient
  - ☐ Refused treatment
  - ☐ Referred to: _____

REMARKS

Influenza vaccination may carry added importance

The possible reemergence of Severe Acute Respiratory Syndrome (SARS) has led the World Health Organization (WHO) to stress the importance of influenza vaccination for individuals in certain high-risk groups.

The recent global outbreak of SARS heightened concern about the occurrence of respiratory diseases having symptoms similar to those seen in SARS. Considerable uncertainty surrounds the question of whether SARS might recur, perhaps according to a seasonal pattern. Currently, SARS has no vaccine, no effective treatment, and no reliable point-of care diagnostic test. As the recurrence of SARS during the influenza season cannot be ruled out, some health authorities are concerned that cases of influenza and other respiratory diseases, particularly when they occur as clusters in health care facilities, could raise suspicions of SARS, resulting in disruption of health services as well as costly precautionary measures and investigations.

Influenza is one of several diseases causing fever and respiratory symptoms that might raise suspicions of SARS. However, influenza is of particular concern because of the potential for institutional and community outbreaks and regional epidemics. Influenza typically infects 10% to 20% of the total population during seasonal epidemics. Most cases of severe illness and deaths associated with influenza occur in certain groups at high risk for developing secondary complications, including pneumonia. Such groups include the elderly, the immunocompromised, and persons with underlying chronic cardiopulmonary, renal, or metabolic disease. Influenza vaccination in high-risk groups and among health workers caring for them will reduce the number of pneumonia cases which could be confused with SARS. For example, in elderly persons cared for in institutions, influenza vaccine is effective in preventing 80% of deaths, 50-60% of hospitalizations or pneumonia and 30-40% of influenza illnesses.[1]

U.S. officials recently announced that influenza vaccine supplies are expected to be sufficient to meet the anticipated demand for the 2003-04 influenza season and no vaccine shortages are anticipated. The State of California has reduced by 23% the amount of influenza vaccine that will be made available to the Orange County Health Care Agency this year for community vaccination programs. This reduction in the State's influenza vaccine program will place additional importance on obtaining flu shots from physician offices. The federal Medicare program covers the cost of influenza vaccine and administration of the vaccine for Part B Medicare beneficiaries. Flu shots are also available at a variety of retail locations where vaccine is administered for a modest fee, including drug stores and supermarkets.

[1] World Health Organization, 9/2/2003

CDC adds rash assessment tool

The Centers for Disease Control and Prevention (CDC) has added a rash illness evaluation tool to its suite of smallpox related information included on the CDC website.

The rash illness evaluation, found at http://www.bt.cdc.gov/agent/smallpox/diagnosis/riskalgorithm/index.asp, asks questions about the type of rash illness, followed by inquiries about major and minor smallpox criteria. After entering all requested information, users receive a computer-based evaluation of the risk for smallpox and are provided with recommendations. A link to the page is also found on the CDC's main smallpox resource page at http://www.bt.cdc.gov/agent/smallpox/index.asp.

MRSA *(Continued from Page 1)*

MRSA.[7] **Many CA-MRSA infections were first attributed to spider bites.**

CA-MRSA strains differ from hospital-acquired MRSA (HA-MRSA) strains in significant ways. CA-MRSA isolates are often susceptible to many of the agents to which HA-MRSA are resistant. CA-MRSA and HA-MRSA strains from the same geographic area have different pulsed-field gel electrophoresis (PFGE) patterns. The SCC*mec* found in CA-MRSA is much smaller than that of HA-MRSA isolates. The fulminant infections seen in many CA-MRSA cases may be related to production of a leukocidin known as Panton-Valentine leukocidin.

While treatment of soft tissue infections through incision, drainage, and local care is usually sufficient, if antibiotic treatment is indicated, culture and sensitivities are increasingly important in guiding the selection of an antibiotic in CA-MRSA infections, which are often sensitive to oral antibiotics such as tetracycline, clindamycin, trimethoprimsulfamethoxazole. CA-MRSA isolates are often sensitive to oral antibiotics such as tetracycline, clindamycin and trimethoprim sulfamethoxazole. In severe infections, combination therapy may be necessary. Attention to use of gloves, handwashing, disposal of dressings and other materials in contact with the infected area, cleaning surfaces of exam rooms (commercial disinfectant or 1:100 solution of diluted bleach), and proper laundering of linens will help to prevent transmission in the outpatient setting.

Vancomycin-resistant *S. aureus* (VRSA)

In 1997 the first case of *S. aureus* infection with reduced sensitivity to vancomycin (vancomycin-intermediate *S. aureus* or VISA) was reported in the United States. Since then, seven more cases of VISA have been documented. In 2002 the first case of VRSA in the United States was reported; a second case occurred later the same year. Both isolates were susceptible to other antibiotics (e.g., chloramphenicol, linezolid, minocycline, trimethoprim-sulfamethoxazole). Independent risk factors for VISA or VRSA are treatment with vancomycin and infection with MRSA. In both VRSA cases, it appears that a vancomycin-resistant enterococcus transferred the gene for vancomycin resistance (*van*A) to MRSA within the patient. VISA and VRSA may be underrecognized because fully automated susceptibility testing systems and disk diffusion testing may not correctly identify them. Laboratories using either of these methods should add either a vancomycin screen plate or non-automated minimum inhibitory concentration (MIC) method. **Any VISA or VRSA isolate should be reported to Orange County Epidemiology at 714-834-8180**.

Resources

- CDC website: http://www.cdc.gov/ncidod/hip/Aresist/mrsa.htm
- Methicillin-Resistant *Staphylococcus aureus* Infections Among Competitive Sports Participants — Colorado, Indiana, Pennsylvania, and Los Angeles County, 2000—2003 http://www.cdc.gov/mmwr/preview/mmwrhtml/mm5233a4.htm
- Boyce J. Update on Resistant Staphylococcus aureus Infections. Clinical updates in infectious diseases, June 2003;VI(2). http://www.nfid.org/publications/clinicalupdates/id/staphresistant.html
- Orange County Epidemiology program MRSA information for clinicians http://www.ochealthinfo.com/epi/mrsa/providers.htm
- MRSA information for patients http://www.ochealthinfo.com/epi/mrsa/index.htm

[1] Semiannual report: Data aggregated from the National Nosocomial Infections Surveillance System. Centers for Disease Control and Prevention, December 2000. Available at: http://www.cdc.gov/ncidod/hip/NNIS/DEC2000sar.PDF

[2] SHEA Guideline for preventing Nosocomial Transmission of Multidrug-Resistant Strains of *Staphylococcus aureus* and *Enterococcus*. Infect Control Hosp Epidemiology 2003;24:362-386.

[3] Patients admitted from long term care facilities or other acute-care facility, admissions to rehabilitation units, dialysis patients, patients readmitted within 30 days of previous hospital discharge.

[4] MMWR 48(32):707-710. August 20, 1999.

[5] MMWR 52(5):88.

[6] MMWR 52(33):793-795.

[7] San Francisco Department of Public Health. http://www.dph.sf.ca.us/HealthInfo/adv_mrsa_stis_20030205.pdf

ORANGE COUNTY REPORTED CASES OF SPECIFIED NOTIFIABLE DISEASES

Second Quarter (Weeks 1-26)
Number of Cases by Year of Report

DISEASE	2003	2002	2001	2000
AIDS	131	145	109	123
AMEBIASIS	3	8	17	13
CAMPYLOBACTERIOSIS	110	118	133	167
CHLAMYDIA	2692	2887	2568	2591
CRYPTOSPORIDIOSIS	8	4	4	1
E-COLI O157:H7	2	1	1	3
FOOD POISONING OUTBREAKS	19	38	17	6
GIARDIASIS	52	56	85	113
GONOCOCCAL INFECTION	325	360	287	315
H-FLU, INVASIVE DISEASE	2	2	2	3
HANSEN'S DISEASE, LEPROSY	0	0	0	1
HEPATITIS A (acute)	41	60	80	138
HEPATITIS B (acute)	13	26	24	33
HEPATITIS B (chronic)	632	651	779	828
HEPATITIS B (perinatal, acute & chronic)[1]	1	4	N/A	N/A
HEPATITIS C (acute)	3	2	5	1
HEPATITIS C (chronic)	786	841	1339	1319
HEPATITIS OTHER/UNSPECIFIED	3	8	6	17
HIV[2]	309	N/A	N/A	N/A
KAWASAKI DISEASE	17	12	7	10
LISTERIOSIS	1	8	8	5
MALARIA	2	7	5	7
MEASLES (RUBEOLA)	0	2	4	0
MENINGITIS, TOTAL	147	132	96	136
ASEPTIC MENINGITIS	124	103	77	97
MENINGOCOCCAL INFECTIONS	11	5	11	15
MUMPS	2	5	2	3
NON-GONOCOCCAL URETHRITIS	292	407	303	368
PERTUSSIS	35	40	5	12
PELVIC INFLAMMATORY DISEASE	20	40	25	32
RUBELLA	0	0	0	1
SALMONELLOSIS	87	121	118	159
SHIGELLOSIS	45	47	47	101
STREP, INVASIVE GROUP A	30	36	20	24
SYPHILIS, TOTAL	139	179	106	125
PRIMARY	8	9	10	3
SECONDARY	8	6	14	10
EARLY LATENT	9	19	16	8
LATENT	5	1	5	4
LATE LATENT	108	142	61	91
CONGENITAL	1	2	0	9
NEUROLOGICAL	0	0	0	0
TUBERCULOSIS	56	90	78	80
TYPHOID FEVER, CASE	8	2	0	0

NA= Not Available
[1]Previously included in Hepatitis B acute or chronic totals. Separate reporting started in 2002.
[2]Orange County officially began HIV case reporting July 1, 2002; data is unavailable for previous years.

PUBLIC HEALTH Bulletin
COUNTY OF ORANGE • HEALTH CARE AGENCY

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